

Running head: FORT APACHE ARSON PROBLEM

Solving the Arson Problem

On the Fort Apache Indian Reservation

James Langborg

White Mountain Apache Fire and Rescue, Whiteriver, Arizona

CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

Signed: _____

Abstract

White Mountain Apache Fire & Rescue (WMAFR) provides fire service protection to the White Mountain Apache Tribe, who reside on the Fort Apache Indian Reservation (FAIR) located in Northeastern Arizona. The FAIR is currently home to 17,500 permanent residents. In 2008, WMAFR responded to 225 fires. Of those fires, 70 percent (157) were determined to be acts of arson or suspicious in nature.

The problem is that the FAIR has a disproportionately high incidence of arson related fires that have resulted in significant property loss, serious injuries, and death. The descriptive research model was used through a literature review, data analysis, interviews, and a review of other arson prevention programs to answer six questions. Why does our community have such a high incidence of arson fires? What steps can our organization and community take to prevent arson fires? What resources would be needed to adopt and enforce an arson prevention program? Is this problem unique to Native American Communities or are there other cultural and or socioeconomic factors that predispose communities to high rates of arson? What actions have other communities, who have faced similar problems, taken to prevent arson from occurring in the future? What are the true financial, life safety, and psychological effects of arson on our community?

A literature review, combined with a series of surveys and interviews, provided a close look into what can be done to address the problem. The researcher discovered that arson is most likely a symptom of a deeper problem which must be addressed from a cultural and fire prevention approach using education, engineering, enforcement, and economic based strategies.

Table of Contents

Certification Statement.....	2
Abstract	3
Table of Contents	4
Introduction	5
Background and Significance	7
Literature Review	11
Procedures	19
Results	21
Discussion	24
Recommendations	26
Reference List	32

Appendices

Insert-A: Arizona Reservation Map.....	35
Insert-B: South Dakota Reservation Map.....	36
Insert-C: Survey Letter and Questions to other Tribal Fire Departments.....	37
Insert-D: WMAFR Implementation Plan	38

Introduction

White Mountain Apache Fire & Rescue (WMAFR) provides fire and rescue service to the White Mountain Apache Tribe, who reside on the Fort Apache Indian Reservation (FAIR) located in Northeastern Arizona. The FAIR is currently home to 17,500 permanent residents who live in the communities of Cibique, Whiteriver, and Hon-Dah (WMAT, 2010).

In 2008, WMAFR responded to 225 brush, structure, and rubbish fires. Ninety percent of those fires (202) occurred in the Whiteriver Community. Of those 202 fires, approximately 70 percent (140) were determined to be acts of arson or suspicious in nature. Of significance is the Canyon Day neighborhood, which is located at the south end of the Whiteriver Community. From March of 2005 to March of 2010, it has experienced 109 suspicious or arson related fires (WMAFR, 2010).

In comparison to the neighboring communities of Pinetop, Lakeside, and Show Low, WMAFR responds to a significantly higher number of fires. For instance, according to Assistant Chief Stewart Bishop of the Pinetop Fire Department (PTFD), in 2009 their organization who protects a permanent population of 4,500 residents and an approximate seasonal population of 30,000 people, responded to only 40 fires. Of their 40 fires, ten percent were determined to be arson related or suspicious in nature (S. Bishop, personal communication, March 12, 2010). Fire Chief Tim Van Scooter of the Lakeside Fire Department (LSFD), who protects a population of 4,500 residents, stated that their fire department responded to 53 fires in 2009. Of LSFD's 53 fires, 28 percent were determined to be arson related or suspicious in nature (T. Van Scooter, personal communication, March 12, 2010). Battalion Chief Dewy Ray of the Show Low Fire Department (SLFD), who protects a permanent population of 11, 500 residents and a seasonal population of up to 30,000 residents, stated that SLFD responded to 76 fires in 2009. Chief Ray

related that 18 percent of their 2009 fires were arson related or suspicious in nature (D. Ray, personal communication, March 12, 2010). In comparison to neighboring communities, who collectively average an 18.6 percent rate of arson related or suspicious in nature fires, the Whiteriver Community averages 51.6 percent more arson related or suspicious fires.

The problem is that the Fort Apache Indian Reservation has a disproportionately high incidence of arson related fires that have resulted in significant property loss, serious injuries, and death. The purpose of this research project is to objectively examine why our community is experiencing this high rate of arson and form conclusions regarding what can be done to prevent arson fires in the future. This research is intended to answer six questions that will help WMAFR design a program which will be used to prevent arson fires in the future.

1. Why does our community have such a high incidence of arson fires?
2. What steps can our organization and community take to prevent arson fires?
3. What resources would be needed to adopt and enforce an arson prevention program?
4. Is this problem unique to Native American Communities, or are there other cultural and/or socioeconomic factors that predispose communities to high rates of arson?
5. What actions have other communities, who have faced similar problems, taken to prevent arson from occurring in the future?
6. What are the true financial, life safety, and psychological effects of arson on our community?

The information contained within this document will be used to form conclusions that will assist WMAFR in designing an arson prevention program. Therefore, the author will use the descriptive research model through a literature review, data analysis, interviews, and a review of other arson prevention programs.

Background and Significance

White Mountain Apache Fire and Rescue (WMAFR) is a tribal fire service organization which was founded in 1988. WMAFR operates out of three staffed stations that house three engine companies. Minimum staffing is comprised of three 4-person engine companies and an on duty deputy chief, twenty-four hours a day.

WMAFR provides fire and rescue service to the Fort Apache Indian Reservation, located in Northeastern Arizona. The service area is comprised of twelve small communities and their surrounding vicinities. Geographically and demographically, this equates to approximately 2,600 square miles and a permanent population of approximately 17,500 (WMAT, 2008, p. 13).

Contained within this geographic area, is an approximate 60,000 square foot casino / hotel, a ski resort, a 40 bed hospital, 12 schools, one community college, dozens of federal buildings, a large canyon, three lumber mills, and multiple commercial and retail occupancies. Also included, are hundreds of miles of wilderness area prone to massive wild fires, as demonstrated during the 2002 Rodeo-Chediski Fire, which consumed 467,066 acres and threatened several local communities, including Show Low, Pinetop, and Lakeside (P. Kuehl, personal communication, October 6, 2009).

The Fort Apache Indian Reservation is located approximately 170 miles Northeast of Phoenix, Arizona and is located in, what is best described as, high desert. This reservation is one

of the oldest Native American Reservations in the United States and was legally recognized as a reservation in the late 1800s. Unique to this reservation, is the fact that White Mountain Apache people are indigenous to these lands and were not relocated, as many other Native American Tribes were. The White Mountain Apache People have existed in these lands for thousands of years, making this reservation very rich in culture and history (Langborg, 2009).

Located on the FAIR, is the historic Fort Apache, which according to Karl Hoerig, PhD, who is the director of the Fort Apache Historical Society, was once the staging area for the massive hunt of the elusive and feared Geronimo. Later it became home to the first Indian Boarding School in the State of Arizona (K. Hoerig, personal communication, September 10, 2009). The same boarding school is still in use today with a student body of over 80 children.

Many famous military units and historical figures also spent time here, including the Buffalo Soldiers, General Crook, and Theodore Roosevelt. Today, there are over a dozen historic buildings still standing in Fort Apache. Many of these historic structures are occupied and still in use (K. Hoerig, personal communication, September 10, 2009).

From 2005 to March 2010, WMAFR responded to 651 fires. These fires consisted of structure fires, grass / brush fires, dumpster fires, and nuisance fires (WMAFR Call Stats, 2010). Unique to this fire department is the high number of working structure fires. In 2008, WMAFR received 46 alarms for working structure fires (WMAFR, 2009). This number is extremely high in comparison to three neighboring fire departments consisting of Pinetop Fire Department, Lakeside Fire Department, and Show Low Fire Department.

According to Assistant Chief, Stuart Bishop of Pinetop Fire Department (PTFD), his fire department protects a permanent population of 4,500 residents, with an approximate seasonal

population of 30,000 people. He went on to relate that his NFIRS data showed that PTFD responded to 10 structure fires in 2008 (S. Bishop, personal communication, October 2009).

Fire Chief Tim Van Scooter of Lakeside Fire Department stated during a telephone interview that his fire department protects a population of 4,500 people and his fire department responded to 23 structure fires in 2008 (T. Van Scooter, personal communication, October 2009).

During a telephone interview with Fire Chief Ben Owens of Show Low Fire Department (SLFD), he related that his organization responded to 16 working structure fires in 2008. SLFD provides service to a population of 11, 500 permanent residents and up to 30,000 during peak seasons (B. Owens, personal conversation, October 2009).

According to WMAT Tribal Judge Reagan Armstrong Senior, crimes committed on Indian reservations are handled differently than crimes committed on non tribal lands. For instance, the local tribal judicial system does not have the authority to try felony level crimes (R. Armstrong, personnel communication March 23, 2010). Therefore, arson that result in damage greater than \$1,500.00 are considered a felony level crime and must be handled by the Bureau of Indian Affairs (BIA) criminal investigation division and tried in the federal court system (R. Armstrong, personnel communication March 23, 2010).

According to the United States Code Title 18, which covers crimes and criminal procedures, any Native American who commits crimes against another Native American or on tribal land such as arson, burglary, and robbery, which is considered a felony under section 661 of this title, shall be subject to the same laws and penalties as all other persons committing any of the above offenses, and fall under the exclusive jurisdiction of the United States (US Code Title 18, 2001, § 1153).

The WMAT Criminal Code defines arson as unlawful burning. Which is further defined as willfully and unlawfully causing or attempting to cause damage to any property by fire or explosion; or negligently causing damage to any property by fire or explosion; or setting fire to any forest, brush or grasslands, or starting a campfire, with careless disregard for the spread or escape of such fire (WMAT Criminal Code, 2009, Section 2.69).

United States Code, Title 18, § 1153 defines arson as “whoever, within the special maritime and territorial jurisdiction of the United States, willfully and maliciously sets fire to or burns any building, structure or vessel, any machinery or building materials or supplies, military or naval stores, munitions of war, or any structural aids or appliances for navigation or shipping, or attempts or conspires to do such an act” (US Code Title 18, 2001, § 1153).

According to BIA Special Agent Augie Lupe, the financial constraints the federal government is facing has resulted in a significant reduction of BIA arson investigators (A. Lupe, personnel communication January 2010). There are four major Indian Reservations in Eastern half of Arizona which include the Navajo Nation, Hopi Nation, Fort Apache Indian Reservation, and the San Carlos Indian Reservation. From a geographical standpoint, the combined land of the three reservations account for literally thousands of miles (see Insert-A) and an approximate population of 250,000 people (university of Arizona, 2010). At this time, Special Agent Lupe is the only trained BIA Arson Investigator for this portion of Arizona (A. Lupe, personnel communication January 2010).

According to Judge Armstrong, the local judicial system will occasionally try an individual charged with unlawful burning in an attempt to punish a suspected arsonist (R. Armstrong, personnel communication March 23, 2010). White Mountain Apache Tribal Criminal Code states that “a person found guilty for unlawful burning may be sentenced to

imprisonment for a period not to exceed one hundred twenty days or to pay a fine not to exceed one hundred twenty dollars” (WMAT Criminal Code, 2009, Section 2.69).

Literature Review

Asking why the FAIR has such a high incidence of arson fires is a compelling question and must be looked at from both cultural and historical perspective. Historically, the White Mountain Apache People used fire as a tool to maintain the land, keep camp sites clean, and nourish important crops, such as medicinal plants and corn. Fire was considered an important part of the ecosystem and a way maintain the cycle of life (White, 2001).

Spiritually, the White Mountain Apache people consider fire to be a living spirit which was an essential component during the making of the earth (Goodwin, 1994, p. 77). Fire is also viewed as a natural living entity with power greater than a human. As a result, many traditionalists believe that fire can not be fought. At best it can only be tamed temporally if it allows you. As a result, many elders and traditionalist resist using the term firefighter (Goodwin, 1994, p. 123).

Considering why this isolated population experiences a high incidence of arson related fires, in comparison to their neighboring communities, should begin by looking at the problem from a psychological perspective. To accomplish this, two psychiatric experts and medical journals were consulted in an attempt to offer some enlightenment.

Arson is defined by the Merriam-Webster Dictionary as the willful or malicious burning of property, especially with criminal or fraudulent intent, circa 1680 (Merriam Webster, 2010).

The Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV), defines pyromania as “a pattern of deliberately setting fires for pleasure or satisfaction derived from the relief of tension experienced before the fire-setting”. The name of the disorder comes from two

Greek words that mean "fire" and "loss of reason" or "madness." The DSM-IV, classifies pyromania as a disorder of impulse control, meaning that a person diagnosed with pyromania fails to resist the impulsive desire to set fires—as opposed to the organized planning of an arsonist or terrorist (DSM-IV, 2000, p. 669-670).

The DSM-IV also states that “there is no statistical data available to determine at what age pyromania can begin”. Additionally “an individual with pyromania can be indifferent to the consequences of the loss of life and property caused by the fire, and may derive satisfaction by the resultant destruction” (DSM-IV, 2000, p. 269).

The DSM-IV states that six criteria must be met for a patient to be diagnosed with pyromania. “The individual must have a history of setting fires deliberately and purposefully on multiple occasions. The individual needs to also state that they experience feelings of tension or emotional arousal before setting the fires. The individual must state that he or she is fascinated with, attracted to, or curious about fire and circumstances surrounding fire. The individual must experience relief, pleasure, or satisfaction from setting the fire or from witnessing or the activities that occurred during and after the fire was set. The individual has no other motives for setting fires, such as financial gain; ideological convictions (i.e., terrorist or political beliefs); anger or revenge; a desire to cover up another crime; delusions or hallucinations ; or has impaired judgment secondary to substance abuse, mental illness, mental retardation, or traumatic brain damage”. Finally, “the fire setting behavior is not accounted for by another pre-existing anti-social personality disorder, a conduct disorder, and/or a manic episode” (DSM-IV, 2000).

In an effort to understand the psychological components of fire setting, the author interviewed Dr. Darwin West PhD. and Dr. Donald Campbell PhD. who serve as clinicians at Apache Behavioral Health Services located on the FAIR. This facility is a private not for profit

medical clinic focused on helping tribal members with mental health problems predominant in the local population.

During the interviews, this author learned some interesting information regarding the White Mountain Apache people and the Native American population. According to Dr. West, who is the Clinical Director, “the Native American population has the highest incidence of suicide among any other American demographic”. “For over 15 years the FAIR has had the highest number of suicides per capita than any other Native American community, with an annual average of six suicides, and 500 attempts per year” (D. West, personnel communication March 29, 2010).

Dr. Campbell brought up a psychological condition known as anomie. Though few studies have been done regarding the presence of anomie among Native American populations the concept appears to have relevancy when considering the observable social condition of the White Mountain Apache People.

The condition of anomie was first described by Emile Durkheim who was a French Sociologist in the early 1900's. He used anomie as a way to describe a social condition of regulatory break downs and morale disregard within a set of people. He further described anomie as a common finding in societies who have lost touch with their culture and belief systems. This can results in a lack of learned and accepted moral code among the affected group or community of people (Giddens, 1972, p. 173).

Castens who is a Canadian Anthropologist wrote an essay comparing Durkheim's hypothesis of anomie among disenfranchised populations to the aboriginal people displaced during the migration of the Europeans to North America. Much of what Castens said was

focused on the aboriginal people of Canada, but it appears to be applicable to Native American populations.

In particular, Castens looked at Durkheim's *faits sociaux* which is French for the social facts impacting a population and compared them to North American aboriginal populations living on reservations. He found that Durkheim listed social disorganization, breakdown of communal ties and traditional values, loss of traditional culture, geographic isolation, political disempowerment, and poverty as key factors in the onset of *anomie* (Castens, 2000, pp. 315 - 317).

In an effort to remain objective and ensure all avenues have been explored, it is important that the terms fire-setting and fire-play be defined. Putman and Kirkpatrick distinguish between the juvenile fire setter behavior of fire-play and fire setting. Fire play is described as a curiosity based behavior with little intent of malice. Where fire setting is typically secondary to malicious intent and appears to be more prominent in adolescent age children. Interestingly fire-setting also tends to be a chronic nature and is done with the intent to cause destruction and personal harm. The distinction between adolescent fire-play and fire-setting demonstrates that children are capable of using fire as a weapon (Putman and Kirkpatrick, 2005, p. 2).

Fire-setting is also an indicator of underlying psychological pathology, usually secondary to some type of internal or external origin. External origins are social and cultural that promote the use of fire, where internal origins tend to be caused by some type of preexisting or developing biochemical imbalance or psychological problem caused by previous emotional trauma, such as sexual and/or physical and emotional abuse (Putman and Kirkpatrick, 2005, p. 3).

According to the National Fire Protection Association's (NFPA) 2008 Fire Loss Report US fire departments responded to 1,451,500 fires in 2008. Of those fires, 30,500 (2.1 percent) were intentionally set which resulted in 315 civilian deaths and \$866,000,000 in property damage (Karter, 2009, pgs. i-iii).

National Fire Incident Reporting System (NFIRS) statistics show that the leading cause of civilian deaths is arson, at 28 percent. Arson is also the leading cause of property loss and damage, at 26 percent (Karter, 2009, pgs. i-iii).

If the origins of arson are pathological in nature, the degree to which the person afflicted with the disease is being affected should be considered. Lowenstein of the UK describes "fire setting behavior as the end results of poorly understood temperaments comprised parental psychopathology and neurochemical imbalances". He further divides arson into four major categories, arson unassociated with psychobiologic disorders, arson associated with mental disorders, arson associated with medical or neurologic disorders, and juvenile fire setters" (Lowenstein, 2000).

According to Lowenstein, an arsonist's profile includes three basic categories:

The Adult Male with slightly above average intelligence, with a history of sexual abuse, who is prescribed antipsychotic drugs and has a history of social and family problems. The adult male typically has a criminal record and a long history of chemical abuse starting at an early age.

Adult females with slightly below average intelligence, a history of sexual abuse, the use of antipsychotic drugs who also have a history of social and family problems".

Male juveniles and adolescence with above average intelligence, a history of sexual, and chemical abuse. Male juveniles also report that they set the fires with the intent to use it as a means of suicide (Lowenstein, 2000).

Lowenstein also designed a Chi Square Analysis which identifies the 14 most common variables in high risk arsonists. These include a history of playing with matches, excitement at fires, revenge fantasies, poor social judgment, cruelty to animals, inadequate super ego development, fears of bodily harm, history of humiliation and insults from adults, high or low IQ, anger over maternal rejection or neglect, sexual confusion, and obsessive compulsive disorder.

According to WMAFR data, approximately 83 percent of arson suspects are between the ages of 13 and 20 with a history of chemical abuse and previous criminal activity (WMAFR, 2008)

Determining why arsonists participate in this behavior could help break the chain of events leading to the behavior. As stated above, Lowenstein describes adult fire setters as people with a history of mental illness, substance abuse, and childhood abuse and neglect. He further describes arsonists as people with auto-aggressive personalities who are suicidal in nature. This personality type includes people who are depressed and have poor impulse control. This emphasizes that fire setting may be a symptom of a much larger underlying problem (Lowenstein, 2000).

Other causes for fire-setting and fire-play are juveniles who are curious about fire and have access to incendiary materials that are not being supervised. From an adult perspective, many arsonists set fires as acts of revenge, financial gain, and to derive sexual pleasure and excitement from observing the fires and the response of the fire department. Additional causes are crime concealment, self injury typically done by females, and peer pressure (Lowenstein, 2000).

Native Americans are prone to alcohol and chemical abuse. On the FAIR, the Rainbow Treatment Center provides some type of substance abuse treatment to over 1,800 patients a year (Rainbow Treatment Center, 2009). With a population of only 17,500 people this means approximately ten percent of the population is in treatment at any given time (WMAT, 2010). It

is unknown how many additional people on the reservation with addiction problems do not seek or are mandated to receive substance abuse treatment.

K.L. Jones, D.W. Smith and their colleagues recognized that many children were presenting with similar abnormalities when their mother consumed alcohol during gestation. In particular, they noted that these children presented with a similar set of facial abnormalities, growth deficiencies, and psychomotor disorders. As a result, they named their finding Fetal Alcohol Syndrome (FAS) (Parimi, Dachel, & Larson, 2003).

Children affected by FAS can suffer an innumerable set of lifelong physical and psychological health issues. In the infant stage, FAS children are prone to become easily agitated and very difficult to comfort. Poor sucking reflexes with a corresponding decrease in weight gain and development is common. As children, FAS will become more noticeable as the child begins to interact with other children and school performance issues, such as behavioral and learning problems, begin to manifest. These behavior and learning problems can include: "Difficulty concentrating, low intelligence, poor memory, lack of fine motor skills, poor judgment, lack of impulse control, difficulty learning right from wrong, and poor social skills" (West Virginia University, 2010).

As adults, people suffering from FAS continue to have challenges throughout their life. Many continue to struggle with poor judgment, impulse control, sexual promiscuity, poor problem-solving skills, difficulty forming and maintaining long term relationships, naiveté, gullibility, difficulty concentrating on tasks, and a poor understanding of social norms (West Virginia University, 2010).

When comparing the FAS findings to arsonist profiles described by Lowenstein, several parallels are uncovered. For instance, FAS victims struggle with poor judgment, impulse control,

poor social skills, and difficulty learning right from wrong (West Virginia University, 2010). All of which coincide with behaviors of an arsonist.

Looking at other mental health and social issues found among the Native American population provides a broader picture of underlying conditions that also parallel with Lowenstein's arsonist profiles. According to the US Surgeon General "large-scale studies of mental disorders among older Native Americans are lacking, but many smaller studies have found rates of depression ranging from 10 to 30%". For instance, the rate of suicide for Native Americans is 1.5 times the national rate with two thirds of these suicides being males between the ages of 15 to 24. Additionally, within the Native American population, violent deaths, unintentional injuries, murder, and suicide comprise 75 percent of all deaths that occur within the second decade of life (US Department of Public Health and Human Services, 2010).

Homelessness among Native Americans is at eight percent, in comparison to the rest of the US population which is at two percent. An estimated 1 out of every 25 Native Americans have been processed through the criminal justice system. Prevalence rates of Native Americans living on reservations with alcohol and drug problems are believed to be as high as 70 percent, in comparison to a national average of 11 - 32% among white, black, and Asian counterparts (US Department of Public Health and Human Services, 2010).

The rate of violent and sexual victimization among Native Americans living on reservations is twice the national average. These results in a 22 percent rate of Post Traumatic Stress Disorder, compared to an 8% rate among the general U.S. population. (US Department of Public Health and Human Services, 2010).

Procedures

The information contained within this document will be used to form conclusions that will assist WMAFR in designing an arson prevention program. The author used the descriptive research model through a literature review, data analysis, interviews, and a review of other arson prevention programs. The literature review presented above unveiled some specific information regarding arson, arson causes, and mental health and social problems predominant in the Native American population.

Incident response data and fire investigation records from WMAFR, spanning a four and a half year period, was examined to determine the following information: What type of fires are we responding to? If these fires were occurring in common geographic locations, and if they were considered suspicious or determined to be arson? Of the arson related and suspicious in nature fires, how many resulted in successful prosecution? What was the age of the convicted or suspected arsonists, and did the arsonist have a history of prior convictions or being a suspect in other investigations?

WMAFR does assist in fire investigations but is not a recognized enforcement entity. As a result, any findings our fire investigator discover must be turned over to the local law enforcement agency or a federal investigative entity such as the Bureau of Indian Affairs (BIA) or Beaureau of Alcohol, Tobacco, and Fire Arms (ATF). Therefore, the White Mountain Apache Police Chief was also asked to assist in providing investigation and prosecution data requested above.

An attempt to gather identical information from other tribal reservations was made. Due to the extreme differences in socioeconomic conditions found among what are legally considered Indian Reservations, only similar reservations were contacted. The author used the following

three criteria to identify similar reservations: Which was confirmed through the United States Census Bureau's Fact Finder web site (US Census Bureau, 2010):

1. *An unemployment rate of 50% or higher.*
2. *A population of at least 3,000 people.*
3. *A poverty rate of 40% or higher.*

NOTE: The above criterion was confirmed with the use of the United States Census Bureau's Fact Finder web site. (US Census Bureau, 2010).

Thirteen Native American reservations met the above criteria and were asked to participate in the research project. All information received from the participating fire departments was obtained during phone interviews with the Fire Chief. A phone interview process was chosen because of variations in record keeping, training, and technology among the different organizations. A phone interview created the most consistent platform for transferring accurate information and conveying the true sense of the situation in the respective community.

During the initial phone call, the Fire Chief was asked if they would be willing to participate in the research project. Once the Fire Chief agreed to include their fire department in the project, a letter was sent to the Fire Chief listing what data would need to be gathered and when the next phone interview would be scheduled. Every fire department agreeing to participate in the project was given a minimum of three weeks to obtain the requested data. The letter sent in advance of the phone interview (see Insert-C) advised the Fire Chief that the author was requesting the following data:

1. Total number of fires per year to include structure, vegetation, and nuisance fires from January 1, 2005 to March 15, 2010.

2. Of these fires, what percentage were considered suspicious in nature or determined to be acts of arson.
3. How many of the arson related fires resulted in a successful prosecution.
4. What was the average age of your convicted arsonist?
5. What is the average age of your suspected arsonist?
6. What type of ordinances does your tribe have in place to punish arsonists?
7. What type of federal agencies partner with your department during investigation and prosecution?
8. What is your average fire loss per year?
9. Do you have an arson prevention program in place?
10. If so, does it have both an education and enforcement component?
11. If you do have an arson prevention program, how long has it been in place and what type of results have you seen?

Results

Data from WMAFR was reviewed and showed the following results:

1. Total number of fires per year, to include structure, vegetation, and nuisance fires from January 1, 2005 to March 15, 2010. **(651)**
2. Of these fires, what percentage were considered suspicious in nature or determined to be acts of arson. **(73.8% / 480 fires)**
3. How many of the arson related fires resulted in a successful prosecution. **(17% / 82 fires)**
4. What was the average age of your convicted arsonist? **(23 years old)**
5. What is the average age of your suspected arsonist? **(15 years old)**

6. What type of laws does your tribe have in place to punish arsonists? **The White Mountain Apache Tribe (WMAT) Criminal Code Section 2.69 states:**

A. A person is guilty of an offense who:

(1) Willfully and unlawfully causes or attempts to cause damage to any property by fire or explosion; or (2) Negligently causes damage to any property by fire or explosion; or (3) Sets fire to any forest, brush or grasslands, or sets a campfire, with careless disregard for the spread or escape of such fire.

B. A person found guilty under this Section may be sentenced to imprisonment for a period not to exceed One Hundred Twenty (120) days or to pay a fine not to exceed One Hundred Twenty Dollars (\$120.00), or both (WMAT, 2010).

7. What type of federal agencies partner with your department during investigation and prosecution? **(BIA and ATF).**
8. What is your average fire loss per year? **(Approximately \$650,000)**
9. Do you have an arson prevention program in place? **(There is currently an Arson Hot Line that keeps the caller anonymous and pays a cash reward.)**
10. If so, does it have both an education and enforcement component? **(Only an enforcement component.)**
11. If you do have an arson prevention program, how long has it been in place and what type of results have you seen? **(According to the WMAFR Fire Chief the program has been in place ten years and has produced limited results.)**

Six of the thirteen tribal fire departments who were originally contacted agreed to participate in this project. The following list shows the geographic location of each reservation:

One located in South Central Arizona

Two located in Southwestern North Dakota

One located in Northeastern Central Arizona

Two located in Northeastern Arizona

Seven of the tribal fire departments declined to participate for the following several reasons:

No data available (one Tribal Fire Department)

No time available to collect the requested data (one Tribal Fire Department)

Not interested in participating in the study (two Tribal Fire Departments)

Fear that any information uncovered by this project would reflect poorly upon the tribe
their tribe and the Native American population(three Tribal Fire Departments)

The author must also note that two of the six Fire Chiefs who agreed to participate in this research did so only if the tribal community they protect would remain anonymous. This request was made because the fire chief believed that the information contained within this paper would reflect poorly upon their tribe. If this negative information found its way to governmental leaders and elected officials in their community, there is a possibility these Fire Chiefs would be terminated. Therefore, the author agreed to document the data in a fashion that would not show the findings of any single fire department or Native American Community.

The following is a compilation of the data shared by these six tribal fire departments who did participate in the study. For ease of reader comprehension, use, and to ensure anonymity the results have been rounded up and based on averages where possible.

1. Total number of fires per year to include structure, vegetation, and nuisance fires for the past seven years. (**Average 112.6**)
2. Of these fires, what percentage were considered suspicious in nature or determined to be acts of arson. (**Average 78 %**)

3. How many of the arson related fires resulted in a successful prosecution.
(Average 14%)
4. What was the average age of your convicted arsonist? (**Average 23.8**)
5. What is the average age of your suspected arsonist? (**Average 17.3**)
6. What type of ordinances does your tribe have in place to punish arsonists?
 - a. Arson Law (**Two Tribes**)
 - b. Illegal Burning Law (**One Tribe**)
 - c. None (**Three Tribes**)
7. What type of federal agencies partner with your department during investigation and prosecution? (**All stated the BIA and ATF**)
8. What is your average fire loss per year? (**Average \$423,000**)
9. Do you have an arson prevention program in place?
Yes (**One Tribe**)
No (**Five Tribes**)
10. If so, does it have both an education and enforcement component?
(**Enforcement only. This was accomplished by training a tribal police officer to perform fire cause investigations**)
11. If you do have an arson prevention program, how long has it been in place and what type of results have you seen? (**“It has been in place three years and has resulted in the successful prosecution of one serial arsonists”.**)

Discussion

Several common findings have been found throughout the course of this research project. First, both the literature and every tribal representative contacted indicated that there are serious

socioeconomic and substance abuse problems in their communities. Second, there is a high incidence of arson in impoverished Native American communities. Third, within these communities arson appears to be accepted as part of life.

It is well documented that crime, substance abuse, domestic violence, and suicide are prevalent in communities with socioeconomic problems. In particular, the effects of wide spread alcohol and drug abuse seem to be at the heart of all community and family problems on reservations. The negative consequences of alcohol and substance abuse in Native American populations are mental, physical, spiritual, and emotional.

This knowledge leads to asking if alcohol and substance abuse are the cause of the arson problem in these communities? In other words, if there were no alcohol or substance abuse issues on the FAIR, would arson still be a problem? Or, is arson just another symptom of a deeper underlying problem?

If arson is simply another symptom of a greater problem, what can a fire department do to effectively identify and address these problems? Can this be accomplished by the fire department working with other social service agencies? Or should the fire department leave these problems to other professionals who have training and education in these areas.

This becomes a difficult question to answer because part of the fire service mission is prevention. Therefore, if a fire department knows they have a fire problem, they should make every effort possible to prevent it from continuing. At the same time, if arson is a result of deep sociological problems, are fire service personnel capable of handle these issues. Finally, if fire service personnel do become involved in these activities, to what degree should they participate?

It can be concluded that arson is an accepted part of life in these communities because it is so prevalent and little is done to stop it. As stated earlier in this paper only two of the six

Native American communities used in this study have laws in place to deal with arson. One has an illegal burning law and the remaining three have nothing. The only logical conclusion that can be made is the people living within these communities have become conditioned to the prevalence of arson and do not recognize it as a destructive and costly problem.

The literature review supports this conclusion through work done by Durkheim, who concluded that disenfranchised people can lose their sense of morality which leads to self destructive behavior (Giddens, 1972). The loss of morality can be seen in high incidence of arson and what appears to be the acceptance of it by the people living within these communities. Arson is viewed as just another part of life on the reservation. In contrast, most western cultures do not accept arson. This is demonstrated by the laws and penalties their governments have put in place and follow on a consistent basis.

Recommendations

To deal with the arson problem found on the FAIR and in other Native American Communities, the Four E's approach taught in the Executive Analysis of Community Risk Reduction was used. The Four E's consist of Education, Enforcement, Economic, and Engineering. Each of these areas was addressed individually and then brought together to form a arson prevention package.

First, the educational component of the approach was looked at to determine how best to use it. With the understanding that the people in these communities are aware of arson but are not alarmed by its effects, a strategy of awareness has been used. The intention is to educate and make people aware of what the actual negative effects are to their community using real data.

This approach must first begin with educating both formal and informal leaders within the community. An example would be to educate tribal council members of what the annual dollar

loss is believed to be to the tribe. This dollar amount should not only include the cost of property loss, but also include the full impact of a fire. Such as, but not limited to, what it costs to investigate the fire, relocate the occupants, and any medical bills from injuries caused by the fire. In order to get close to accurately determining the true cost of arson, many agencies will need to work together to accomplish this. Unfortunately, the author had a difficult time receiving feedback from department heads of other tribal and BIA agencies.

Additionally, informal leaders such as local pastors, medicine men, and respected elders within the community should be educated about what arson is doing to their community. This will have two benefits. Respected elders are listened to by members of the community and the success of any program is unlikely without their support. Second, the cultural insight and advice a respected elder can provide is invaluable.

Once the support of the local government and respected elders has been achieved, it will be time to begin educating the next level in the community hierarchy, and department heads. Educating department heads, as stated above, will facilitate the needed cooperation to obtain valuable data and partnerships that target addressing the problem.

For instance, if the Police Department trained a few of their officers as fire investigators and had them work in tandem with fire department investigators, the likely hood of better prosecution rate is likely. Additionally, support by the housing authority could result in better engineering when new construction is being planned.

After partnerships support for the cause is in place with community leaders and partnerships have been formed, it will be time to the begin educating the general public. Education should be done at two levels and from two perspectives. First, the adult population must be made aware of the problem and reconditioned not to accept it. Second, the youth must

be taught not to accept arson and to understand how it will negatively impact their people if it is tolerated.

This can be accomplished by implementing public service awareness campaigns through the local media sources such as the Fort Apache Scout Newspaper, KNNB Radio Station, and the WMAT website. Newspaper articles regarding the impacts of the problem followed by articles about suspected arson related fires. The KNNB Radio Station could assist by airing interviews with the Fire Chief and other respected community leaders who will talk about the arson problem. Additionally, a series of short public service announcements (PSA) using the voices of tribal council members and other noteworthy representatives such as the current WMAT Princess, or a well know local Rodeo Champions. These quick PSAs could address everything from how much arson costs the tribe, to how to report a crime anonymously.

A school program should also be developed that begins when a child enters school and lasts throughout their education. The curriculum for this program will need to be developed in partnership with the local school district and implemented as part of the regular school year program.

The ideal curriculum would include information about the negative effects of arson and the historical and cultural use of fire based on traditional beliefs. The goal will be to retrain the local children to respect and use fire as their ancestors did. A side benefit would be the preservation of some of the traditional knowledge which is being lost.

This curriculum should be delivered to the children by fire service representatives, teachers, and respected tribal elders. Each type of spokesperson can deliver a message from a different perspective. The fire service representative can do so from a fire and life safety perspective, the teacher from a life skill perspective, and an elder from a traditional perspective.

An enforcement program that addresses the severity of the problem from a punitive perspective must be developed. In order to achieve this, laws must be written and enforced to ensure people who commit these crimes are punished.

To ensure success, the process should begin with educating tribal council members about the severity of the problem and why these laws are needed. This will help in getting proposed ordinances adopted.

Law enforcement officers and judges will also need to be trained about any and all laws that are adopted. Training should include informing these officials about the severity of the problem in an effort to help understand why these laws are important and their role in ensuring they are enforced. Training should also be conducted in a fashion that fosters dialogue between the fire department and the legal system so that each entity learns how best to work with each other in an effort to ensure the maximum benefit of any laws passed.

Enforcement should also include component of rehabilitation so that convicted arsonists are treated for their problem as well as punished. This is an important factor because if the cause of the behavior is not addressed it is unlikely that punitive measures alone will be successful in the adult offender.

Economically arson should be addressed from two perspectives. First, data should be compiled that reflects the true loss associated with arson. As stated earlier, the economic losses sustained from arson go beyond the loss of property. Second, a financial incentive program can be put in place that rewards people who provide information that leads to the arrest and successful conviction of a suspected arsonist.

To obtain data that reflects the true cost of arson, multiple agencies will need to compile data. At a minimum, the following agencies will need to scan their database: WMAT Housing

Authority, Whiteriver Indian Health Service Hospital, WMAT Police Department, WMAT Judicial System, and BIA Northeastern Arizona Law Enforcement Division.

If these agencies were to compile how much is spent in dealing with the effects of arson, the true impact of this problem can be seen. Once the true financial impact is revealed, leaders can better understand how this problem is affecting them. This is important because the WMAT is self insured and is currently facing significant economic challenges. In July of this year, a 40 percent across the board layoff program went into place in all tribal funded departments.

A reward program is already in place for anyone who reports an arson related crime through the “Arson Hotline”. This program has been in place for several years but is not considered successful by the fire chief because it is rarely used even though the caller can remain anonymous and still receive a cash reward. It is hoped that if the public is educated about actual impact arson has on their community more people will call.

Engineering can be addressed two ways. First, an education and fine system can be designed that promotes the proper maintenance of fire suppression and detection systems. Second, the housing authority can specify that construction techniques and building materials that inhibit the spread of fire are stated in bid specifications.

Currently, WMAFR does do annual commercial building inspections to ensure fire safety considerations are in place. The Fire Chief is also in the process of working with the Tribal Council in an effort to adopt the 2010 International Fire Code and Building Code. Currently, the WMAT does not have or recognize or use any type of fire code. A fire inspector has no legal authority to require an occupant to do anything. The adoption of fire code will enable a fire inspector to address fire safety issues through enforcement.

According to Victor Vasquez, who is the former director of the WMAT Housing Authority, “the funding for a minimum of thirty new single family residences is provided to the tribe annually” (V. Vasquez, personnel communication May 13, 2010). This presents a great opportunity to promote the use of noncombustible building materials and the installation of residential sprinkler systems. This opportunity is maximized by the fact that the economy has slowed and contractors are becoming more competitive when bidding for jobs.

An Implementation Plan (Attachment 2A) based on the Four E’s and the above recommendations has been developed. It includes a vision followed by specific, measurable, achievable, and time sensitive objectives. Outcome, impact, process, and formative objectives have been used to ensure the plan is effective and realistic. A project budget (Attachment 3A) will be submitted with the implementation plan to the Fire Chief to ensure that the project is funded.

Dealing with the arson problem found on the FAIR will be a difficult and lengthy process. It will require a commitment by WMAFR, local governmental leaders, and the citizens of the community. Addressing the problem, using the Four E’s approach, will be instrumental in assuring that the implementation plan is effective and all encompassing. Only time will tell if this program will reduce the number of arson related fires. It is the authors hope that this project will be successful and can be used by other similar tribal fire departments to address similar problems in their communities.

References

- American Psychiatric Association: *Diagnostic and statistical manual of mental disorders*, Fourth Edition, Text revision. Washington, DC, American Psychiatric Association, 2000.
- Castens, P. (2000). An essay on suicide and disease in canadian Indian reserves: bringing durkheim back in. Retrieved April 7, 2010 from http://www2.brandonu.ca/Library/cjns/20.2/cjnsv20no1_pg309-346.pdf
- Giddens, A. (1972). *Emile durkhiem: selected writings*. London: Cambridge University Press
- Goodwin, G. (1994). *Myths and tales of the white mountain apache*. New York, The University of Arizona Press
- Karter, M., J. (2009). Fire loss in the united states 2008. National Fire Protection Association Fire Analysis and Research Division. Quincy, ME:
- Langborg, J., C. (2009). *Effective resource deployment standards*. Author
- Lowenstein, L., F. (2003, November 1). *Research into arson: Incidence, causes and associated features, Predictions comparative studies, and prevention and treatment*. Psychiatry, Psychology and Law. 10 (1), 192-198
- Merriam Webster Dictionary. (2010). Merriam Webster online dictionary: definition of arson. Retrieved May 24, 2010 from <http://www.merriam-webster.com/dictionary/arson>
- Mohegan Tribe, (2010). *Mohegan tribe website*. Retrieved August 12, 2010 from <http://www.mohegan.nsn.us/government/structure.aspx>
- Parimi, V., Dachel, J., Larson, P. (2003) *Alcohol as a teratogen- fetal alcohol syndrome*. Department of Environmental and Public Health, University of Wisconsin at Eau Claire. Retrieved April 11, 2010, from <http://people.uwec.edu/piercech/fas/home.htm>
- Putman, C., T. and Kirkpatrick, J., T. (2005). *Juvenile fire-setting: a research overview*.

Retrieved May 15, 2010 from ww.opj.usdoj.gov

Rainbow Treatment Center. (2009). *Annual client services report*

US Department of Public Health and Human Services. (2010) *Surgeon general's report: native*

american indian fact sheet. Retrieved May 24, 2010 from

<http://mentalhealth.samhsa.gov/cre/fact4.asp>

United States House of Representatives. (2001). *Unite states legal code, title 18*. Retrieved May

24, 2010, from <http://uscode.house.gov/download/pls/18C5.txt>

West Virginia University. (2010). *Robert c. byrd health service center: fetal alcohol*

syndrome. Retrieved May 18, 2010, from

http://www.hsc.wvu.edu/som/cmed/alcohol/fetal_alcl.htm

White, G. (Fall 2001). How native americans used fire. *Northern Lights Magazine*, pp. 17-

21.

White Mountain Apache Fire & Rescue. (2009). *White mountain apache fire & rescue*

standard of cover.

White Mountain Apache Fire & Rescue. (2009). *White mountain apache fire & rescue*

NAFIRS incident response data base.

White Mountain Apache Fire & Rescue. (2010). *White mountain apache fire & rescue*

NAFIRS incident response data base.

White Mountain Apache Tribe. (2000). *Tribal criminal code*. Retrieved May 24, 2010, from

<http://www.wmat.nsn.us/Legal/Criminal.html>

United States Census Bureau. (2010). *American fact finder*. Retrieved August 3, 2010, from

http://factfinder.census.gov/home/saff/main.html?_lang=en

University of Arizona, Tucson. (2010). *Economic development research program; arizona's*

native american tribes. Retrieved May 27, 2010 from

<http://edrp.arid.arizona.edu/tribes.html>

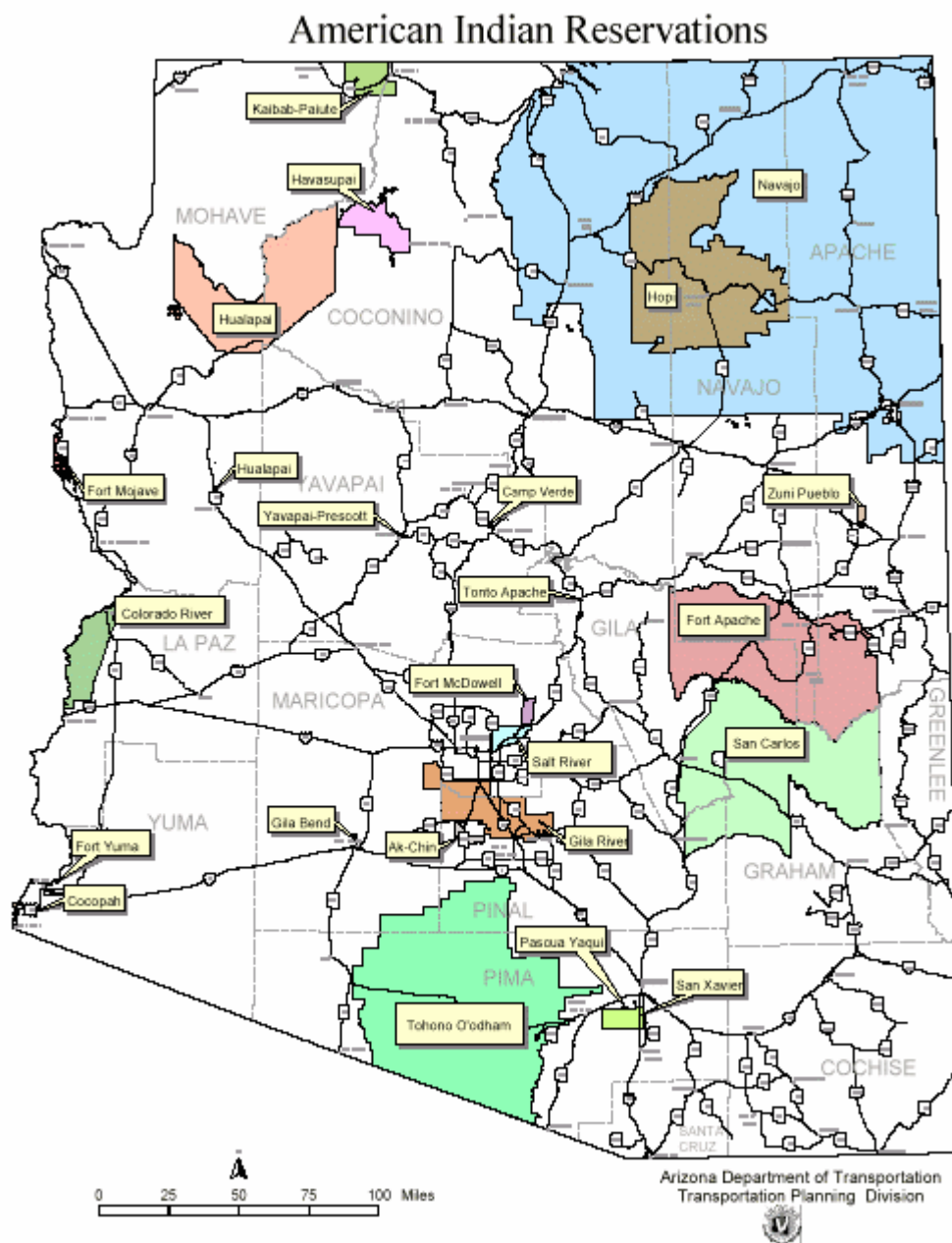


Figure-1



Location of Tribal Lands in South Dakota
(Map courtesy of the U.S. Census)

Figure-2



White Mountain Apache Fire & Rescue Dept.
PO Box 1929, 610 S. Chief Ave., Whiteriver, AZ 85941
Phone: 1-928-338-4311 Fax: 1-928-338-4474

May 24, 2010

Chief _____,

As we discussed in our telephone conversation I am working on a research project to determine the true impact of arson on our community. In order to do this, I need some comparative data to determine if this problem is unique to our community or if other similar Native American communities are suffering from the same problem.

I realize the attached questionnaire will require a lot of work on your part to complete. At the same time, I want to state the importance of this project, particularly if the arson problem is not unique to our community. Any information that I am able to uncover will be shared with other similar fire departments for their use and knowledge.

I thank you very much for your time and dedication to helping us solve this problem. I will close by reminding you that fires seem to happen more frequently in poor communities. Unfortunately, it is the poor who are impacted the greatest by property loss. Please join me in trying to prevent some of these fires.

Respectfully,

Jim Langborg
Deputy Chief

IMPLEMENTATION / EVALUATION PLAN

White Mountain Apache Fire & Rescue Arson Prevention Program

Vision: The Fort Apache Indian Reservation will become a safer community.

Problem Statement: The Fort Apache Indian Reservation has a disproportionately high incidence of arson related fires that have resulted in significant property loss, serious injuries, and death.

Goal: The Fort Apache Indian Reservation will become an arson free community.

Outcome Objectives

- By May 31, 2014, compared to baseline data, there will be a 50 percent decrease in arson related fires on the Fort Apache Indian Reservation.
- By May 31, 2014, compared to baseline data, there will be a 50 percent decrease in injuries related to arson fires on the Fort Apache Indian Reservation.
- By May 31, 2014, compared to baseline data, there will be a 50 percent decrease in property loss sustained from to arson related fires on the Fort Apache Indian Reservation.
- By May 31, 2014, there will have been no arson related fatalities on the Fort Apache Indian Reservation since the beginning of this program.

Impact Objectives

- BY January 1, 2013 the WMAT Council will have amended Section 2.69 of the criminal code to increase the penalties for arson to the maximum allowed by law. Evaluation Method: Amendment in code. Interventions: Education and Enforcement
- BY January 1, 2013 there will be 50 percent increase in the number of Arson Hot Line tips received by community members. Evaluation Method: Compare baseline data Interventions: Education, Economic Incentives
- BY January 1, 2013 the WMAT Housing Authority will have either secured or demolished at least 50 percent of the abandoned structures on the reservation. Evaluation Method: Compare baseline data. Interventions: Education and Engineering
- BY January 1, 2013 WMAFR, the BIA, and ATF will adopt a formal agreement describing a three way coalition intended to improve how the three agencies investigate and prepare an arson case for prosecution. Evaluation Method: Adoption of the agreement. Interventions: Education, Economic, and Enforcement

Process Objectives

- Starting June 1, 2010 the project coordinator will begin meeting with members of the tribal legal division to begin drafting an amendment to Criminal Code Section 2.69. Evaluation Methods: The Fire Chief will meet monthly with the project coordinator to discuss progress. Intervention: Enforcement
- Starting June 1, 2010 the project coordinator will begin issuing public service announcements to be read on the local radio station to inform the community about the need to report arson related fires on a monthly basis. Evaluation Method: Broadcasting of the PSA's Intervention: Education and Economic
- Starting June 1, 2010 the Life Safety Educator will begin coordinating with engine company officers and tasking them with going to elementary schools and delivering quarterly arson prevention education to children in the second grade. Evaluation Method: Delivery of the education Intervention: Education
- Starting June 1, 2010 the project coordinator will begin issuing removable signage to be placed on the side of our fire engines that communicate public education messages concerning arson prevention. Evaluation Method: Signage delivered and in place at the beginning of each month. Intervention: Education and Economic
- Starting June 1, 2010 the project coordinator will begin meeting with key members of the BIA and ATF fire investigation teams to begin drafting an agreement between the three agencies in an effort to improve our prosecution rate. Evaluation Methods: The Fire Chief will meet monthly with the project coordinator to discuss progress. Intervention: Enforcement and Economic Incentives

Formative Objectives

- By June 1, 2010 the Criminal Code Amendment Project Coordinator will have made the initial invitations to a member of the legal division team to begin discussions about amending Criminal Code Section 2.69.
- By December 31, 2010 will have a draft copy of the Criminal code amendment ready for discussion at the January 2011 Chief's Meeting.
- By June 1, 2011 a final draft of the Criminal Code Amendment will be submitted to the Fire Chief for approval.
- By December 31, 2011 the Fire Chief will have made a presentation to the WMAT Council and submitted the proposed code amendment.

- By December 31, 2012 the WMAT Council will have adopted the amendment to Criminal Code Section 2.69.
- By June 1, 2010 the Life Safety Educator will make a presentation to the KNNB Director and present him with an overview of the Public Service Announcements (PSAs) WMAFR would like to have announced over the air.
- By December 31, 2010 the Life Safety Educator will be delivering monthly anti arson PSAs to be read over during radio programming. *This process will be ongoing and arson related fires will be tallied on a quarterly basis to measure effectiveness.*
- By June 1, 2010 the Engine Signage Project Coordinator will develop and present to the Fire Chief the first removable anti arson and arson hot line advertisement for the sides of all department fire engines.
- By December 31, 2010 the Engine Signage Project Coordinator will be delivering new monthly anti arson and arson hot line for the sides of all department fire engines to the Deputy Chiefs. *This process will be ongoing and arson related fires will be tallied on a quarterly basis to measure effectiveness.*
- By June 15, 2010 the Arson Investigation Coalition Project Manager will have met with members of the BIA and ATF fire investigation and determined if the formation of a coalition is desired by all three agencies.
- The following goals are contingent upon the success of the above goal.
- By December 31, 2010 a needs assessment will have been completed and submitted to the Fire chief for review.
- By June 1, 2011 a draft version of an agreement will be submitted to the Fire Chief for review.
- By December 31, 2011 the agreement will be signed and in place by all three agencies.